

REMARKS

New claims 66-82 have been presented to respond to issues raised by the Examiner under 35 U.S.C. 112, second paragraph, and to patentably distinguish over the cited art.

Entry of the above amendments is respectfully requested.

Rejection under 35 U.S.C. 112, Second Paragraph

Claims 47-65 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In particular, the Examiner indicates that the preferably phrase for notations for R1, R2 and X is indefinite and that the phrase “such as” renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention.

In response, and to advance the prosecution, Applicants have presented new claims 66-82, which do not include the preferably phrase or the phrase “such as”. Accordingly, Applicants submit that the rejection has been overcome, and withdrawal of this rejection is respectfully requested.

Anticipation Rejection

Claims 55 and 56 are rejected under 35 U.S.C. 102(b) as anticipated by WO 00/55110 or equivalent US 6,733,690 (US ‘690).

In response, Applicants submit that the new claims refer to compounds which have a chiral group as spacer “Sp”, or an alkyl-ester-alkyl as spacer “Sp”. In WO 00/55110, there is no

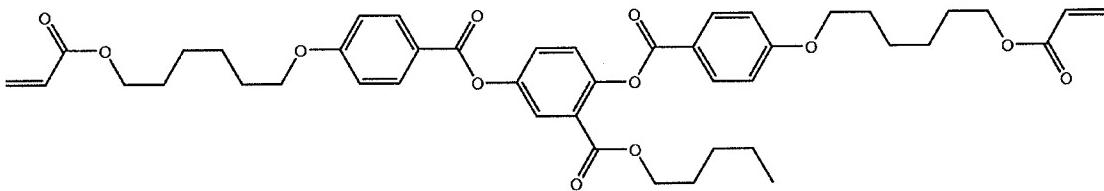
compound cited having such spacers. The compound of example 3 or compounds VI or VII have ester groups directly linked to an aromatic group, however, not in the alkylene spacer.

Hence, Applicants submit that the present invention is novel over WO 0055110 or equivalent US 6,733,690, and withdrawal of this rejection is respectfully requested.

Obviousness Rejection

Claims 47-54 and 57-65 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 00/55110 or equivalent US 6,733,690 above cited.

In response, Applicants submit that US 6,733,690 describes in example 3 a liquid crystal compound of the following formula



This compound differs from the compound (I) of the present invention in:

- this compound of US 6,733,690 is not chiral, and
- this compound does not comprise a side chain having an alkyl-ester-alkyl group.

The compounds of the present invention differ not only in their chemical structure, but also have different transition temperatures to the isotropic state.

There is not any hint provided in US 6,733,690 that and how the compound structure of example 3 could be changed for arriving at the additives of the present invention. No process is described that and how a chiral group or an ester group could be introduced in the alkyl side chains of the compound of example 3.

It was much more surprisingly found in the present invention that with the novel additives the orientation property could significant be accelerated (see example 9 of the invention, on pages 57 to 60, wherein the orientation time of the doped mixture is 1 minute, whereas the undoped mixture needs 15 minutes) and the aligning properties could be significantly enhanced as shown in example 10 of the invention.

This high orientation in only 1 minute was accessed by a novel mixture of the invention, wherein only 2% of the additive was present.

This advantageous influence of low amounts of additives of the invention to a liquid crystal mixture could not be foreseen starting from the teaching of US 6,733,690.

Hence, Applicants submit that the present invention is non-obvious over the teaching of US 6,733,690, and withdrawal of this rejection is respectfully requested.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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